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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Kenneth C. Mennen, *et al.*

Art Unit: 3283

Serial No.: 10/811,401

Examiner: Beach

Filed: March 26, 2004

For: Automatic Hydraulic Load Leveling System for a Work Vehicle

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### RESPONSE TO OFFICE ACTION

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Mail Stop Amendment  
Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Applicants respectfully traverse the rejection of the subject patent application contained in the Office Action mailed on January 4, 2006.

Claims 1-25 are pending. Claims 1, 21, and 22 stand rejected, while Claims, 2-20, and 23-25 merely have been objected to as depending from a rejected claim, but otherwise would be allowable.

Claims 1, 21, and 22 were rejected under 35 U.S.C. §102 as being anticipated by Tozama, *et al.*

The present invention relates to controlling multiple hydraulic actuators on a machine, such as the telehandler in Figure 1 that has a boom 13 which can be raised and

lowered by a lift hydraulic actuator 16. A load carrier 18, at the end of the boom, is tilted up and down by a load carrier hydraulic actuator 24. The claimed control method maintains the load carrier at a predefined orientation as the boom is raised and lowered.

Claim 1 recites a method in which a boom velocity command is received designating the desired linear velocity for the lift hydraulic actuator that moves the boom. The third to last step in this claim produces a load carrier velocity command based on the boom velocity command and a sensed position of the lift-hydraulic actuator. That load carrier velocity command is then adjusted and used to operate the load carrier hydraulic actuator. Thus, a command designating the linear velocity for the lift hydraulic actuator, that raises and lowers the boom, is used to produce a velocity command for operating the load carrier hydraulic actuator which moves the load carrier.

In contrast, the system in the Tomaza, *et al.* patent operates in the inverse matter to the claimed method. The rejection cited the control diagram in Figure 3 of the patent in which operator levers 6 or 8 are manipulated to indicate a vertical or horizontal velocity for the tip 112 of the bucket 400 (the load carrier). Such lever operation produces a load carrier target velocity signal that is applied to a controller 1, and specifically to individual control sections 1A, 1B, and 1C associated with the hydraulic actuators 120, 121, and 122, respectively, that operate the boom 200, stick 300, and load carrier 400. Therefore, in response to a received load carrier velocity command, the three hydraulic actuators 120, 121, and 122 are driven to move their associated machine component so that the load carrier travels in the direction and speed indicated that velocity command. Thus, the a command is received that indicates the desired velocity of the load carrier 400 and that

load carrier command is used to produce another command for driving the lift hydraulic actuator 120 for the boom.

That is completely opposite to the presently claimed method in which a boom velocity command is received, indicating the desired linear velocity for the boom lift actuator hydraulic, and from that boom command, a load carrier velocity command is derived to operate the load carrier hydraulic actuator. Thus, the reference does not teach or even suggest the invention recited in Claim 1.

Claim 21 also specifies receiving a command that designates the desired velocity for the boom and producing a load carrier velocity command based on the boom velocity command. For the same reasons as stated with respect to claim 1, the Tomaza, et al. patent does not teach or suggest the method recited in Claims 21 and 22.

Therefore, Claims 1, 21, and 22 are not anticipated under 35 U.S.C. §102.

### **Conclusion**

In view of these distinctions between the presently claimed method and the method in the cited patent, reconsideration and allowance of the subject application are requested.

Respectfully submitted,  
Kenneth C. Mennen, *et al.*

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